

WHAT IS CLAIMED IS:

1. A positioning device with an object table and a drive unit by which the object table is displaceable over a guide parallel to at least an X-direction, which guide is fastened to a first frame of the positioning device while a stationary part of the drive unit is fastened to a second frame of the positioning device which is dynamically isolated from the first frame, wherein a reaction force exerted by the object table on the drive unit during operation and arising from a driving force exerted by the drive unit on the object table is transmittable exclusively into the second frame.

2. A positioning device as claimed in claim 1, wherein the object table is coupled to the stationary part of the drive unit exclusively by a Lorentz force of a magnet system and an electric coil system of the drive unit during operation.

3. A positioning device as claimed in claim 2, wherein the magnet system and the electric coil system belong to a first linear motor of the drive unit, which drive unit comprises a second linear motor with a stationary part fastened to the second frame and a movable part which is displaceable parallel to the X-direction over a guide of the stationary part, the magnet system of the first linear motor being fastened to the object table and the electric coil system of the first linear motor being fastened to the movable part of the second linear motor.

4. A lithographic device with a machine frame which, seen parallel to a vertical Z-direction, supports in that order a radiation source, a mask holder, a focusing system with a main axis directed parallel to the Z-direction, and a substrate holder which is displaceable perpendicularly to the Z-direction by means of a positioning device, the positioning device of the substrate holder including an object table and a drive unit by which the object table is displaceable over a guide parallel to at least an X-direction, which guide is fastened to a first frame of the positioning device while a stationary part of the drive unit is fastened to a second frame of the positioning device which is dynamically isolated from the first frame, wherein the first frame of the positioning device of the substrate holder belongs to the machine frame of the lithographic device, while the second frame of the positioning device of the substrate holder belongs to a force frame of the lithographic device which is dynamically isolated from the machine frame; and wherein a reaction force exerted by the object table on the drive unit during operation and arising from a driving force

exerted by the drive unit on the object table is transmittable exclusively into the second frame.

5. A lithographic device as claimed in claim 4, wherein the mask holder is displaceable perpendicularly to the Z-direction by means of said positioning device, and wherein the first frame of the positioning device of the mask holder belongs to the machine frame of the lithographic device, while the second frame of the positioning device of the mask holder belongs to the force frame of the lithographic device.

6. A lithographic device with a machine frame which, seen parallel to a vertical Z-direction, supports in that order a radiation source, a mask holder which is displaceable perpendicularly to the Z-direction by means of a positioning device, a focusing system with a main axis directed parallel to the Z-direction, and a substrate holder which is displaceable perpendicularly to the Z-direction by means of a further positioning device, the positioning device of the mask holder including an object table and a drive unit by which the object table is displaceable over a guide parallel to at least an X-direction, which guide is fastened to a first frame of the positioning device while a stationary part of the drive unit is fastened to a second frame of the positioning device which is dynamically isolated from the first frame, wherein the first frame of the positioning device of the mask holder belongs to the machine frame of the lithographic device, while the second frame of the positioning device of the mask holder belongs to a force frame of the lithographic device which is dynamically isolated from the machine frame; and wherein a reaction force exerted by the object table on the drive unit during operation and arising from a driving force exerted by the drive unit on the object table is transmittable exclusively into the second frame.